Amendment to the Claims:

1.   (Cancelled)

2.   (Currently Amended) ~~The LAN switching apparatus of claim 1 further comprising:~~
A local area network (LAN) switching apparatus for interconnecting a LAN segment to an Asynchronous Transfer Mode (ATM) network comprising:

a plurality of LAN ports, wherein each LAN port connects one unique LAN segment to a LAN switch;

at least one ATM port, wherein each ATM port of the LAN switch interfaces to the ATM network;

a connection means for establishing a plurality of connection paths simultaneously, wherein each said connection path establishes a connection through the switching apparatus between any two or more of the plurality of LAN ports and ATM ports, said connection path for transmitting data comprising LAN frames;

a data transmission means for formatting data for transmission over said LAN into standard LAN frames in compliance with the international standard of Open Systems Interconnection (OSI), wherein said standard provides a universally applicable layered architecture containing seven layers, numbered from 1 to 7, with each layer having a set of defined functions and providing a set of services to and from the adjacent two layers; and

a LAN to ATM format conversion means for changing the format of data as it traverses the LAN switch from LAN port to switch to ATM port, wherein LAN frames are converted to switch frames for transfer through the switching apparatus and switch frames are converted to ATM frames in preparation for transfer to the ATM network;

an ATM to LAN format conversion means for changing the format of data as it traverses the LAN switch from ATM port to switch to LAN port, wherein ATM frames are converted to switch frames for transfer through the switching apparatus and switch frames are converted to LAN frames for transfer to the LAN port; and

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an ATM adapting apparatus for converting ATM frames to ATM network format and ATM network format to ATM frames, wherein ATM network format comprises segmenting said ATM frame into sequential ATM cells comprising 5 bytes of header and 48 bytes of data; and

a first multiprotocol processing means, wherein said LAN switch converts either layer 2 or layer 3 of the OSI standard from LAN frames to switch frames to ATM frames, wherein LAN frames are compatible with LAN protocol and ATM frames are compatible with the first ATM adapting apparatus protocol;

a second multiprotocol processing means, wherein the LAN switch converts either the layer 2 or layer 3 of the OSI standard from ATM frames to switch frames to LAN frames.

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3.   (Original) The LAN switching apparatus of claim 2, further comprising a sorting means for the ATM port, wherein the ATM port sorts LAN frames arriving from said switch connection path and ATM frames arriving from the ATM network into three categories, comprising:

a first category of frames for routing, wherein layer 3 of the OSI standard is converted from LAN frames to ATM frames, or layer 3 of the OSI standard is converted from ATM frame format to LAN frame format;

a second category of frames for bridging, wherein layer 2 of the OSI standard is converted from LAN frame format to ATM frame format or layer 2 of the OSI standard is converted from ATM frame format to LAN frame format; and

a third category of frames for aborting, wherein LAN frames or ATM frames are erroneous and cannot be routed or bridged.

4.   (Cancelled)

5.   (Cancelled)

6.   (Cancelled)

7.   (Cancelled)

8.   (Cancelled)

9.   (Cancelled)

10.   (Cancelled)

11.   (Cancelled)

12.   (Cancelled)

13.   (Cancelled)

14.   (Cancelled)

15.   (Cancelled)

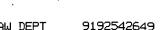16.   (Cancelled)

17.   (Cancelled)

18.   (Cancelled)

19.   (Cancelled)

20.   (Cancelled)

21.   (Cancelled)

22.   (Original) A format converter comprised only of hardware for bridging frames from a first frame format to a second frame format, said bridging without requiring processor intervention.

23.   (Withdrawn) A message frame sorter for sorting first type and second type frames based on destination address to a first queue and a second queue, wherein first type frames are stored in said first queue and second type frames are stored in said second queue.

24.   (Original) A bridging apparatus comprised only of hardware for converting and forwarding frames having a first frame format to frames having a second frame format, said conversion without requiring processor intervention.

25.   (Original) The bridging apparatus of claim 24, further comprised of conversion tables for assisting in said converting and forwarding of frames.

26.   (Withdrawn) A protocol adaption apparatus comprised only of hardware for converting and forwarding frames having a first protocol to frames having a second protocol, said conversion without requiring processor intervention.

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27.   (Withdrawn) A LAN emulation system comprising:

a plurality of a local area networks (LANS);

an ATM network;

a plurality of LAN switches for interconnecting LANs and ATM networks;

a controlling processor; and

a LAN emulation means, wherein communications in the form of frames are transmitted from a first LAN to the LAN switch to the ATM network to the LAN switch to a second LAN.

28.   (Withdrawn) The LAN emulations system of claim 27 wherein the LAN emulation means further comprises LAN emulation control hardware for presetting LAN switch controls in advance of the frame transmission for controlling the ATM network to function like a LAN when transporting frames from LANs to ATM or ATM to LANs.

29.   (Withdrawn) The LAN emulation system of claim 28 wherein the LAN emulation means further comprises a LAN emulation header means for identifying frames having information for presetting the LAN emulation control hardware.

30.   (Withdrawn) The LAN emulation system of claim 29 wherein the LAN emulation control hardware further comprises a plurality of registers for storing LAN emulation headers, wherein each register contains a unique LAN emulation header data pattern.

31.   (Withdrawn) The LAN emulation system of claim 30 wherein the plurality of registers specify the set of LAN emulation headers that contain information for presetting the LAN emulation control hardware.

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32.   (Withdrawn) The LAN emulation system for claim 30 wherein the LAN emulation means further comprises a LAN emulation control sorting means for checking each LAN emulation header arriving from the ATM network to determine fi the LAN emulation header matches any of the prestored plurality of LAN emulation headers in the registers and contains information for presenting the LAN emulation control hardware.

33.   (Withdrawn) The LAN emulation system of claim 32 wherein the LAN emulation means further comprises a forwarding means, wherein frames arriving from the ATM network containing information for presetting the LAN emulation control hardware are sent to the controlling processor to be processed.

34.   (New) The format converter of claim 22 wherein the first frame format is a format selected from the group of ATM format and LAN format and the second frame format is a switch format.

35.   (New) The format converter of claim 22 wherein the first frame format is a switch format and the second frame format is a format selected from the group of ATM format and LAN format.

36.   (New) The bridging apparatus of claim 25 wherein the first frame format is a format selected from the group of ATM format and LAN format and the second frame format is a switch format.

37.   (New) The bridging apparatus of claim 25 wherein the first frame format is a switch format and the second frame format is a format selected from the group of ATM format and LAN format.

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